

Remarks

Claims 9, 18, 25, 48-50 are cancelled. Claim 8 is amended to correct typographic errors. The amendment of Claim 8 is supported at Page 9, lines 9-10. New claims 51-58 find support in Example 2, of the specification and Page 5, lines 3-23. Accordingly, no new matter is presented herein.

Claim rejections 35 U.S.C. § 112, second paragraph

In the Office Action claims 9, 18, 25, 36, 45 and 48-50 were rejected under 35 U.S.C. § 112, second paragraph as being indefinite for failing to provide a non-zero lower bound for the dopant concentrations in the plastic optical fiber ("POF") formed by the claimed methods. Accordingly, Claims 36, and 45 were amended to remove any recitation to a 0% dopant concentration.

Further Claim 20 was rejected under 35 U.S.C. § 112, second paragraph for reciting a trademarked material as a claim limitation. Accordingly, Claim 20 has been amended to delete the tradenames "Teflon PFA", "Teflon AF", and "Teflon FEP" and instead claim "perfluoroalky-oxy polymers, amorphous fluoropolymers, and fluorinated ethylene propylene copolymers."

Claim rejections under 35 U.S.C. 103(a)

Claims 1-18, 21-25, 28-36 and 39-45 were rejected 35 under U.S.C. § 103 in view of Koike et al. Claims 19, 20, 26, 27, 37, 38, 46, 47 were rejected under 35 U.S.C. § 103 in view of Koike et al. and Schneider et al. Independent Claims 1 and 10 have been amended to limit the total dopant concentration in each spinning material to less than approximately 20% by weight of each spinning material. Explicit support for this amendment may be found at Page 9, lines 10-11 and further in Examples 1 and 2. Applicant respectfully asserts that Koike does not teach or suggest that the

dopant concentrations in each extrusion layer may comprise less than approximately 20% of the total weight of the extrusion layer. In fact, Koike teaches away from such a limitation. Koike provides no explicit range of allowed dopant concentrations and the disclosed embodiments only teach dopant concentrations that are greater than or equal to approximately 20% by weight of each layer.

Accordingly, the claims 1-8, 10-17, 19-24 as amended are non-obvious in view of Koike alone, or in combination with Schneider et al.

With regard to Claims 28-47 rejected in the above referenced Office Action, Applicant respectfully asserts that Koike does not teach or suggest a method for forming POF from more than three extrusion layers. Indeed, Koike teaches away from the instant invention. *More importantly, Koike's claims are explicitly limited to methods of forming POF from one, two, or three extrusion layers.* Koike explicitly provides:

The present invention further provides a method of manufacturing a plastic optical transmission medium comprising the steps of concentrically multi-arranging two or three extrusion nozzle[s]. . . Col 2, lns. 22-25 and
Two or three extrusion nozzle[s] are concentrically multiarranged . . . Col 5., lns 11-12.

Further, at each opportunity to use broadening language Koike conspicuously uses language limiting the methods to three extrusion layers:

Although doubled nozzles are employed in the apparatus shown in FIG 1, there may be provided three nozzles. . . Col. 6, lns. 61-62.

Thus, even in the case of using three nozzles . . . Col. 5, lns. 59-60.

Each specific Embodiment discloses methods for forming POF from at most three extrusion layers. *Koike neither discusses nor suggests either the methods for forming POF from more than three extrusion layers, or why it is preferable to form POF from more than three layers.* In contrast, not

only does the instant specification teach methods of forming POF from more than three layers, it also teaches the advantages of POF formed from more than three layers:

Although Figure 1 only shows three layers, there is no inherent limitation on the number of layers, . . . In general, as the number of layers in a GI-POF is increased, the bandwidth and loss characteristics of the GI POF may be improved.


See Page 5, lines 1-2. Accordingly, Applicant respectfully asserts that the claims 28-47 are non-obvious in view of Koike alone, or in combination with Schneider et al.

Conclusion

Each of the presently pending claims in this application is believed to be in immediate condition for allowance. Accordingly, Applicants respectfully request that Examiner pass this application to issue.

Respectfully submitted,
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